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THE RELATIONSHIP OF FEDERAL INCOME TAXES TO TOXIC WASTES: A SELECTIVE STUDY

*Richard A. Westin** and *Sanford E. Gaines***

I. ORIENTATION

Every year, American industry generates about 250 million tons of wastes considered hazardous to human health and the environment.¹ Some hazardous waste is industrial wastewater, which generators treat and then discharge into rivers, lakes, and bays, leading to toxic contamination of many water bodies.² Some of the waste is incinerated,³ emitting small amounts of toxic substances into the atmosphere.⁴ Under current and past prac-

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¹ Recent estimates range from 247 to 266 million tons depending on how the estimate was made and what wastes were included. THE CONSERVATION FOUNDATION, STATE OF THE ENVIRONMENT: A VIEW TOWARD THE NINETIES 158-65 (1987) [hereinafter STATE OF THE ENVIRONMENT]. Even as a legal matter the definition of hazardous waste varies in context. Compare Resource Conservation and Recovery Act (RCRA), 42 U.S.C. § 6921(a) (1982) (defines hazardous waste in terms of toxicity, persistence, degradability, flammability, and corrosiveness) with Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. § 9601(14) (1982 & Supp. IV 1986) (defines hazardous substances in terms of lists of substances under various environmental statutes).

² According to one study, 22% of hazardous wastes are released to sewers or surface waters. STATE OF THE ENVIRONMENT, *supra* note 1, at 165 (citing a study by the Congressional Budget Office).

³ In 1983, the estimate was one percent but that figure has probably increased as land disposal has been restricted. *Id.*

⁴ *E.g.*, 40 C.F.R. § 264.343 (1987) (permits small quantities of toxic emissions). See also Nash, *Assessing the Health Risks From Municipal Waste Incineration: An Example From Philadelphia*, ENVIRONMENTAL IMPACT ASSESSMENT REVIEW, Sept. 1987, at 249.

tices, the largest portion of hazardous waste ends up in landfills, where it remains a potential environmental threat for decades to come.⁵

With the passage of the Resource Conservation and Recovery Act (RCRA)⁶ in 1976, Congress began to regulate the disposal of hazardous waste. It followed this initiative in 1980 with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund),⁷ which tackled the problem of cleaning old waste sites. In their original form, both solid waste laws reflected a technological optimism that the country could safely continue profligate production of waste materials so long as it applied better technology (like double liners in landfills) and cleaned up the old, abandoned dumps.

In the 1980s, it became apparent to Congress that no disposal systems could guarantee perpetual containment. Regulation of treatment and disposal of waste, while important, was therefore simply not enough. As a result, Congress broadened the attack and shifted the focus from palliative to preventive measures. For example, the 1984 amendments to RCRA⁸ promote treatment and destruction of hazardous waste through a phased-in prohibition of land disposal of most untreated wastes.⁹ They also promote steps by manufacturers to minimize the generation of hazardous waste by industrial processes.¹⁰ In 1986, Congress increased funding for the "Superfund" waste site clean-up program five-fold, to a targeted level of \$8.5 billion for the period 1986-90.¹¹ Two years later, in keeping with the new emphasis on treatment of currently generated waste, Congress redirected waste site cleanup from the practice of simple removal to

⁵ The Congressional Budget Office and the U.S. Environmental Protection Agency each estimated in the early 1980s that at least two thirds of hazardous waste was disposed of on land. STATE OF THE ENVIRONMENT, *supra* note 1, at 165.

⁶ 42 U.S.C. §§ 6901-6991 (1982, Supp. IV 1986 & West Supp. 1988).

⁷ 42 U.S.C. §§ 9601-9675 (1982, Supp. IV 1986 & West Supp. 1988).

⁸ The Hazardous and Solid Waste Amendments of 1984, Pub. L. No. 98-616, 98 Stat. 3221 (codified as amended at 42 U.S.C.A. §§ 6901-6991(i) (West Supp. 1988)).

⁹ 42 U.S.C. § 6924(d)-(g) (Supp. IV 1986) (land disposal prohibition); 42 U.S.C. § 6924(m) (Supp. IV 1986) (no prohibition for treated wastes). The Environmental Protection Agency has begun to implement provisions through regulation. *E.g.*, 53 Fed. Reg. 30,908 (1988) (to be codified at 40 C.F.R. pt. 148); *id.* 31,138 (to be codified at 40 C.F.R. pts. 264, 265, 266, 268 and 271).

¹⁰ C. HARRIS, W. WANT & M. WARD, HAZARDOUS WASTE: CONFRONTING THE CHALLENGE 162-66 (1987) (describing section 224 of the Hazardous and Solid Waste Amendments of 1984).

¹¹ Superfund Amendments and Reauthorization Act of 1986 (SARA), Pub. L. No. 99-499, 100 Stat. 1613, § 111(a) (Supp. IV 1986) (amending CERCLA, 42 U.S.C. § 9611(a) (1982)).

a more secure landfill toward a clear preference for permanent treatment or destruction of the waste material.¹²

Many states have been equally aggressive about trying to discourage simple waste disposal.¹³ Some states have even attempted to restrict the flow of hazardous waste into their territory.¹⁴ Local governments have often adopted similar restrictions¹⁵ spurred on by increasingly vociferous citizens who unabashedly embrace the "not-in-my-back-yard," or NIMBY, philosophy.¹⁶

More demanding federal regulation, universal local opposition to waste treatment and disposal facilities, and increased long-term liabilities for waste sites have substantially restricted the supply of licensed waste handlers¹⁷ and have sharply increased the costs of waste disposal.¹⁸ As a result of increased costs and downstream liabilities for cleanup, industrial generators have begun to examine more closely their waste management practices and opportunities

¹² SARA § 121(b), 42 U.S.C. § 9621(b) (Supp. IV 1986).

¹³ *E.g.*, California Hazardous Waste Control Act, CAL. HEALTH & SAFETY CODE §§ 25100-25250 (West 1984 & Supp. 1989); New Jersey Solid Waste Management Act, N.J. STAT. ANN. § 13.1E-1 to -135 (West 1979 & Supp. 1988).

¹⁴ Efforts to ban all importation of out-of-state hazardous waste have fallen under commerce clause challenges. *See, e.g.*, Philadelphia v. New Jersey, 437 U.S. 617, 629 (1978). Strict state regulations and taxation of waste generation and disposal, however, have generally survived challenges based on the supremacy clause or on federal preemption grounds. *See, e.g.*, Exxon Corp. v. Hunt, 97 N.J. 526, 543-44, 481 A.2d 271, 280-81 (1984); *see also* CAL. VEH. CODE §§ 31303-31304 (West Supp. 1989). *But see* Rollins Env'tl. Serv., Inc. v. Parish of St. James, 775 F.2d 627, 637-38 (5th Cir. 1985).

¹⁵ *See, e.g.*, ANNE ARUNDEL COUNTY, MD., CODE § 11-408(g)-(i) (1979); *see also* Browning-Ferris Inc. v. Anne Arundel County, 292 Md. 136, 438 A.2d 269 (Ct. App. 1981) (upheld certain features of the county ordinance to control hazardous waste through transport and disposal requirements).

¹⁶ Lester, *EPA Says: Build a New Superfund Site or Lose Money to Cleanup the Ones You've Got*, 6 EVERYONE'S BACK YARD (Citizens Clearinghouse for Hazardous Waste) Spring 1988, at 8. The very title of this publication from a citizens grass roots organization alludes positively to the NIMBY—"Not In My Back Yard"—philosophy. For a discussion of the NIMBY syndrome, see Brion, *An Essay on LULU, NIMBY, and the Problem of Distributive Justice*, 15 B.C. ENVTL. AFF. L. REV. 437 (1988).

¹⁷ "In the United States, the number of active, land-based hazardous waste sites has dropped by two-thirds over the last [1986-87] year because of failure to meet deadlines for complying with operating requirements. The nation's 13 commercial incinerators are operating at 90 percent of capacity; local opposition makes siting new facilities extremely difficult." S. POSTEL, DEFUSING THE TOXICS THREAT: CONTROLLING PESTICIDES AND INDUSTRIAL WASTE 40-41 (Worldwatch Institute, Paper No. 79, 1987).

¹⁸ "As demand outpaces supply and as tighter regulations are placed on disposal technologies, waste management costs are rising rapidly. Landfill prices have skyrocketed to \$240 per ton, a 16-fold increase since the early [1970s]. Incineration of organics now costs between \$500 and \$1,200 per ton. Waste management costs for DuPont, the nation's largest chemical producer, now exceed \$100 million annually." *Id.* at 41.

they may have to reduce the amount of hazardous waste they generate.¹⁹

Waste comprises all non-product hazardous outputs from an industrial operation into all environmental media, even though such outputs may be within permitted or licensed limits.²⁰ Waste reduction focuses on "in-plant practices that reduce, avoid, or eliminate the generation of hazardous waste so as to reduce risks to health and the environment."²¹ The strategies available for reducing waste include using different raw materials in production, modifying production technology, operations, and procedures, recycling waste within plants, and redesigning end-products.²²

Although market forces have begun to modify industrial behavior, many policy analysts find the pace of improvements in waste treatment and waste reduction unacceptably slow. Looking ahead to the next decade, they point out the ultimate futility of treating waste disposal as a single issue of land use or water pollution, and recommend that the private and public sectors alike move toward an integrated approach to waste management and waste minimization.²³ Politicians, industrialists, academicians, and ordinary citizens share the perception that hazardous waste is a pressing national problem and urge that it be solved.²⁴

Reduction of waste at the source has gained special attention as a promising adjunct to the statutory policies for proper disposal and cleanup of old wastes. The congressional Office of Technology Assessment has prepared two studies on waste reduction. One of these

¹⁹ Strelow & Claussen, *Liability Management in Practice: Waste Generators*, 25 Hous. L. Rev. 943 (1988).

²⁰ U.S. CONGRESS, OFFICE OF TECHNOLOGY ASSESSMENT, OTA-ITE-317, SERIOUS REDUCTION OF HAZARDOUS WASTE: FOR POLLUTION PREVENTION AND INDUSTRIAL EFFICIENCY 3 (1986) [hereinafter SERIOUS REDUCTION OF HAZARDOUS WASTE].

²¹ *Id.*

²² The Office of Technology Assessment cites immediate practical measures such as mechanical polishing of metals rather than polishing with solvents, and substituting water-based solutions for those that use hydrocarbon-based solvents. *Id.* at 4.

²³ THE CONSERVATION FOUNDATION, STATE OF THE ENVIRONMENT: AN ASSESSMENT AT MID DECADE 11-12, 319-21 (1984). See also SERIOUS REDUCTION OF HAZARDOUS WASTE, *supra* note 20, at 5.

²⁴ See, e.g., STEERING COMMITTEE ON HAZARDOUS WASTE CLEANUP, THE CONSERVATION FOUNDATION CLEAN SITES AND PRIVATE ACTION: A PLAN TO ACCELERATE PRIVATE HAZARDOUS WASTE CLEANUP 7-10 (1984) (the Steering Committee included industrial leaders, heads of citizen environmental organizations, and two former public officials); Biden, *A New Direction for Environmental Policy: Hazardous Waste Prevention, Not Disposal*, 17 Env'tl. L. Rep. (Env'tl. L. Inst.) 10400 (1987); C. HARRIS, W. WANT & M. WARD, *supra* note 10, at 8-15.

studies espouses the concept of source reduction;²⁵ the other proposes government research, support, and regulation to promote it.²⁶ Academic researchers have studied the European approach to waste management, and have found many of their legal and technological waste reduction strategies applicable in the American context.²⁷ The studies conclude that government regulation and public financial support have their role in waste reduction, but private industry inevitably bears primary responsibility for product and process changes to reduce the volume and toxicity of waste.

The urgent need to marshal the full range of industrial strategies to achieve significant reduction in the amount and toxicity of hazardous waste and the environmentally sound treatment of residual wastes suggests the need to investigate whether the economic incentives embodied in the tax code harmonize with the national hazardous waste management policy or set up dissonances with the policy that discourage private cooperation.²⁸ This Article probes the extent to which federal taxes, as reflected in the Internal Revenue Code of 1986²⁹ (the Code) and elsewhere, are compatible or incompatible with federal environmental policies with respect to hazardous wastes.³⁰

After a brief discussion in Part II of the lack of specific environmental policy input into the drafting of tax legislation, this Article proceeds in Part III to the analysis of the Code provisions affecting firms' management of wastes and their associated risks. This analysis is organized according to the general character of the industrial

²⁵ See SERIOUS REDUCTION OF HAZARDOUS WASTE, *supra* note 20.

²⁶ U.S. CONGRESS, OFFICE OF TECHNOLOGY ASSESSMENT, OTA-ITE-347, FROM POLLUTION TO PREVENTION: A PROGRESS REPORT ON WASTE REDUCTION—SPECIAL REPORT (1987); see also Kehne, *Encouraging Safety Through Insurance-based Incentives: Financial Responsibility for Hazardous Wastes*, 96 YALE L.J. 403 (1986).

²⁷ B. PIASECKI & G. DAVIS, AMERICA'S FUTURE IN TOXIC WASTE MANAGEMENT: LESSONS FROM EUROPE (1987).

²⁸ This Article should not be taken to suggest that tax policy should be used affirmatively to promote non-revenue goals. We take no position here on that controversial question. Even viewing the tax code as exclusively a revenue policy statement, however, it remains relevant to inquire whether the code works at cross purposes to other social policies, and to suggest changes that would make the code at least "policy neutral."

²⁹ 26 U.S.C. §§ 1-9602 (1982 & Supp. IV 1986). Section references are to the 1986 Internal Revenue Code unless otherwise indicated.

³⁰ The domestic focus avoids many difficult issues that would greatly complicate the analysis. For example, it may be timely to suggest that tax benefits should be withdrawn for imports that entail damage to the entire planet, such as products that release chlorofluorocarbons that deplete the vital ozone layer. Additional tax issues arise with respect to export activities that may affect the environment of other countries. These questions deserve research and analysis, but are simply beyond the scope of this Article.

activity affected. Section A deals with the general policy underlying tax deductions. Section B deals with the specifics of industrial operations, including the tax treatment of raw materials, or feedstocks, that are introduced into the production process and tax incentives related to changes in industrial processes and new production technologies. Section C discusses the tax treatment of waste disposal, including both pollution control equipment to treat waste before release to the environment, as well as ultimate waste disposal. Finally, section D considers tax effects on the expenses and insurance or capital accumulations to cover liabilities that may accrue to firms after disposal of waste.

II. TAX LEGISLATIVE PROCESS AND ENVIRONMENTAL ISSUES

In spite of the heightened awareness of environmental issues and Congress's detailed legislation in the past twenty years on a vast range of environmental issues, the legislative process for writing tax law³¹ still has no systematic environmental input. The Constitution calls for tax legislation to begin in the House of Representatives and, implicitly, to move to the Senate and to the Executive for approval or veto.³² In fact, such legislation commonly originates in the Executive Branch, goes to both houses of Congress, and invariably goes into a House-Senate conference before being revoted by the House and Senate. Hearings may or may not be called.

An army of experts interacts with any tax legislation. The Administration has its own experts, particularly in the Office of Tax Legislative Counsel³³ and the Congress has expert staffs at the House Ways and Means Committee and Senate Finance Committee levels. In addition, the staff of the Joint Committee on Taxation operates continuously regardless of legislative activity in the year.³⁴ Yet nowhere in the system does a particular official, committee, or other entity have the assignment to evaluate tax legislation from an environmental perspective.

The *ad hoc* nature of the relationship between federal tax legislation and environmental concerns suggests the need to subject the environmental impact of tax legislation to mandatory thoughtful evaluation and comments. Two avenues to implement such a change

³¹ See generally Surrey, *The Federal Tax Legislative Process*, 31 REC. A.B. CITY OF NEW YORK 515 (1976); Graetz, *Reflections on the Tax Legislative Process: Prelude to Reform*, 58 VA. L. REV. 1389 (1972).

³² U.S. CONST. art. I, § 7, cl. 1.

³³ A segment of the Treasury Department.

³⁴ See *Washington Report: The Joint Committee on Taxation*, 11 TAX ADVISOR 181 (1980).

exist in the National Environmental Policy Act (NEPA).³⁵ One avenue is the Council on Environmental Quality (CEQ) in the office of the President.³⁶ CEQ should advise the President and Secretary of the Treasury on environmental effects of the tax code. The other avenue is NEPA's requirement for an environmental impact statement on all proposals for legislative action,³⁷ a requirement that observers have called NEPA's "neglected mandate."³⁸

In both cases, however, the environmental impact assessment mandate applies to the Executive Branch only,³⁹ and would not affect the congressional end of the legislative process. Congress has substantial expertise available on environmental affairs. To bring this expertise to bear on the analysis of tax legislation, however, would require rules changes and perhaps increased staff. Because most tax legislation actually originates in the Executive Branch, a strict application of NEPA therefore appears to be the more effective approach.

III. TAX CODE TREATMENT OF TOXIC WASTES

A. Public Policy Limitation on Deductions

1. The Limitation in General

All tax deductions were once subject to the so-called "public policy limitation," the gist of which was to disallow a deduction in any instance in which allowing the deduction would frustrate a sharply defined governmental policy.⁴⁰ That limitation remains embedded in the Code. Thus, for example, deductions for casualty losses,⁴¹ losses from extraordinary obsolescence,⁴² and depreciation⁴³ continue to be

³⁵ National Environmental Policy Act of 1969, 42 U.S.C. §§ 4321-4370(a) (1982 & Supp. IV 1986).

³⁶ *Id.* § 4342.

³⁷ *Id.* § 4332(2)(C).

³⁸ F. ANDERSON, D. MANDELKER, & A. TARLOCK, ENVIRONMENTAL PROTECTION: LAW AND POLICY 718 (1984). The tax legislative process has two separate phases. One entails drafting changes in tax law, both to improve the tax code and to raise appropriate levels of revenue. The second entails appropriating funds. In *Andrus v. Sierra Club*, 442 U.S. 347 (1979), the Supreme Court held that NEPA does not apply to appropriations legislation. Because the tax law writing process necessitates amendments to the United States Code, however, it is inherently substantive in nature and therefore warrants environmental impact analysis under NEPA.

³⁹ 42 U.S.C. § 4332(2).

⁴⁰ See, e.g., *Tank Truck Rentals, Inc. v. Commissioner*, 356 U.S. 30 (1958).

⁴¹ I.R.C. § 165 (1986).

⁴² *Id.*

⁴³ *Id.* §§ 167-168.

affected by this limitation. The major exception to the public policy limitation is the narrower limitation on trade or business expense deductions (section 162) and investment-related expense deductions (section 212). For these types of expenses, sections 162 and 212 provide an exclusive short list of circumstances that bar deductions on public policy grounds, namely, certain payments for legislative activities, illegal bribes and kickbacks, treble damages payments under the anti-trust laws, and fines and penalties.⁴⁴ Sections 162 and 212 are otherwise free of moralizing.

Section 162 is the workhorse of the Code. It permits deductions for wages, salaries, rents, and the day-to-day costs of running a business.⁴⁵ The very breadth of section 162 greatly narrows the public policy limitations on business expense deductions because it makes most business deductions legitimate. Still, some residual environmental issues might be the subject of later tax controversies not involving section 162. For example, the public policy limitation should apply to claims for depreciation (otherwise deductible under sections 167 or 168) of conduit or pipe used to direct unpermitted discharge of toxic wastes into a river, or to disallow deductions for losses resulting from the unlawful abandonment of dump sites laden with hazardous materials. The fact that some depreciation expenses may violate public policy appears to have eluded the detection of the commentators. Given the paucity of administrative or judicial guidance, taxpayers cannot be expected to impose the public policy limitation on themselves in preparing their tax returns.

This observation has important implications for waste policy. If taxpayers are not barred from claiming deductions for environmentally destructive business behavior, it amounts to a Code subsidy for facially illegitimate behavior. A student of the tax laws will not be surprised; the purpose of the Code is to raise revenue, subject only to a few broad theoretical constraints, one of which is that businesses, good or evil, should be taxed on their *net* incomes.⁴⁶ Because ill-gotten gains are taxed, the costs of producing such gains are generally deductible provided they are "ordinary and necessary," a term used in sections 162 and 212.

"Necessary" means appropriate and helpful to earning money.⁴⁷ Virtually any business-related expenditure qualifies under this stan-

⁴⁴ *Id.* § 162; Treas. Reg. § 1.212-1 (1988).

⁴⁵ I.R.C. § 162(a).

⁴⁶ See B. BITTKER & M. McMAHON, JR., *FEDERAL INCOME TAXATION OF INDIVIDUALS* ¶ 2.1 (1988).

⁴⁷ *Welch v. Helvering*, 290 U.S. 111, 113 (1933).

dard.⁴⁸ "Ordinary" is generally interpreted to mean "not capital in nature," that is, short-term in nature,⁴⁹ although there is also modest authority for the proposition that ordinary means "not strange."⁵⁰

The notion that ordinary means "not strange" is sometimes used to strike down deductions that for some reason or other offend a court.⁵¹ A court might dredge it up to deny a section 162 deduction on sufficiently egregious facts, for instance, to deny deductions for the costs of unlawfully carting off and dumping toxic wastes. There is apparently no decision on point with respect to environmental issues, so this occasional interpretation of "ordinary" has been of no value in the campaign to diminish the attractions of engaging in environmentally unsound actions. Because of its rare use in only extreme cases, it seems destined to remain a weak weapon.

The amorality of the Code should not be exaggerated. In numerous particular instances, the Code denies business deductions for normative reasons to foster policies of less than overwhelming concern. For example, net wagering losses are disallowed even though the taxpayer might be a professional gambler.⁵² Similarly, losses on the disposition of certain unregistered securities are barred⁵³ and the costs of broadcasting ads into the United States are nondeductible if transmitted from a country with a corresponding rule.⁵⁴ The Code subjects producers and disposers of hazardous wastes to no such limitations, however. While it is not surprising to find that section 162 has not been applied to deny deductions for environmentally unsound behavior, the failure to do so is puzzling when less significant norms have already upset the generalization that any short-lived cost of generating taxable income is currently deductible.

Even though Congress has failed to harness the Code to discourage environmentally unsound business practices, it is possible that the courts could use the existing Code to disallow deductions for environmentally destructive expenditures. To do so, however, judicial interpretation of section 162 of the Code would have to be conspicuously "stretched." At present, the Code effectively encourages unsound practices. Similarly, other less significant Code sections (most notably that for losses)⁵⁵ could be, but have not been,

⁴⁸ See 1 B. BITTKER, *FEDERAL TAXATION OF INCOME, ESTATES & GIFTS*, ¶ 201.1 (1981).

⁴⁹ *Commissioner v. Tellier*, 383 U.S. 687, 689-90 (1966).

⁵⁰ *Welch v. Helvering*, 290 U.S. 111, 113-14 (1933).

⁵¹ See, e.g., *Raymond Bertolini Trucking Co. v. Commissioner*, 736 F.2d 1120 (6th Cir. 1984).

⁵² I.R.C. § 165(d) (1986). But see *Commissioner v. Groetzinger*, 107 S. Ct. 980 (1987) (minimum tax).

⁵³ I.R.C. § 165(j) (1986).

⁵⁴ *Id.* § 162(j).

⁵⁵ *Id.* § 165.

interpreted to prevent deductions for environmentally undesirable behavior.

2. The Deductibility of Punitive Damages

The Code does not prohibit the deduction of punitive damages, except for treble damages under the anti-trust laws.⁵⁶ In other words, section 162 does not bar a deduction for paying punitive damages for egregious behavior in connection with environmental malfeasance. Allowing tax deductions when punitive damages are assessed for environmental misconduct leading to personal injuries, however, represents questionable policy. While it does not positively *encourage* bad acts, the deduction certainly mitigates the sting of judicial sanctions for acts such as negligent spills of dioxin-tainted wastes. Even if judges and juries take deductions into account when fixing the amount of damages,⁵⁷ they will be unaware of the particular judgment-creditor's tax burden, making any judicial tax accounting haphazard.

The question of punitive damages for environmental malfeasance has raised considerable controversy.⁵⁸ The Code should prohibit deductibility for several reasons. If not deductible, the financial burden of the liability will be uniform, regardless of the payor's tax posture. In addition, withdrawing the deduction will operate as an unqualified disincentive for all taxpayers. Finally, legislative policy and judicial action seem to regard environmental malfeasance as more socially reprehensible than anti-trust conspiracies.⁵⁹ Consequently, section 162(g) should be expanded to disallow deduction for punitive damages for such behavior.

3. Illegal Payments

Illegal bribes and kickbacks are nondeductible.⁶⁰ Prohibiting deductions for such expenses covers specific circumstances in environ-

⁵⁶ *Id.* § 162(g).

⁵⁷ Empirical evidence on this question appears to be lacking.

⁵⁸ See 2 Toxic L. Rep. (BNA) 26-27 (June 3, 1987). Most such awards have come in cases brought on a products liability theory. Proposed federal legislation, H.R. 1115, 100th Cong., 2d Sess. (1987), would make it more difficult for courts to impose such damages. *Id.*

⁵⁹ See 18 Env't Rep. (BNA) 584 (June 12, 1987). At a time when antitrust enforcement is declining, environmental enforcement, including criminal prosecution, is increasing in response to public attitudes. *Id.*

⁶⁰ I.R.C. § 162(c)(1) (1986).

mental affairs such as bribes paid to an environmental agency investigator.⁶¹

A broader provision, section 162(c)(2), denies trade or business deductions for "other illegal payments," meaning payments to any person if it is a bribe, kickback, or other illegal payment under any federal law or any state law, provided the state law is generally enforced and subjects the payor to criminal penalty or loss of license to engage in a trade or business, whether or not imposed on the taxpayer.⁶² The key question under section 162(c)(2) is what the term "illegal payment" means. The regulations⁶³ provide no practical guidance, and there seems to be no other interpretive authority.⁶⁴

Section 162(c)(2) will not likely carry much weight with respect to environmental issues. The cases arising under it concentrate on payments that in and of themselves violate the law, such as "payola"⁶⁵ and payments that fall below legal minimums.⁶⁶ Given the broad wording of the statute, one might expect a broader application of "other illegal payment" to sweep in payments that arise in connection with an illegal act. Unfortunately, interpretations of the provision do not support such an application.

The weakness of the provision is clear. It covers only payments that are in themselves proscribed, rather than payments arising in connection with illegal acts. Thus, if a manufacturer pays a trucking company to haul hazardous waste illegally, section 162(c)(2) cannot apply because the typical statute is geared toward the immediate act (dumping wastes), not the payment of money to induce bad acts. To solve this oversight, Congress could easily expand section 162(c)(2) to cover payment in consideration for illegal acts.

B. Tax Treatment of Raw Materials and Feedstocks

1. Percentage Depletion

Although the terms "toxic substances" and "hazardous waste" conjure up thoughts of synthetic chemicals, many of the most heavily used and most toxic substances are naturally occurring minerals,

⁶¹ *Id.*

⁶² *Id.* § 162(c)(2). Again, the burden of proof is on the IRS. *Id.*

⁶³ Treas. Reg. § 1.162-18 (1988).

⁶⁴ The debate so far has concentrated on whether price rebates or kickbacks shown as increased costs of goods sold are to be disallowed as illegal payments. *See* Max Sobel Wholesale Liquors v. Commissioner, 630 F.2d 670 (9th Cir. 1980); Rev. Rul. 82-149, 1982-2 C.B. 56.

⁶⁵ Coed Records, Inc. v. Commissioner, 47 Tax Ct. Rep. (CCH) 422 (1967) (prior law).

⁶⁶ Atzinger-Whitehouse Dairy, Inc. v. Commissioner, 36 Tax Ct. Rep. (CCH) 173 (1961).

such as asbestos, that have been put to commercial or industrial use. Moreover, the synthetic chemicals themselves are derivatives of natural materials, especially petroleum. Because mineral extraction and petroleum production are the root of most hazardous wastes, the percentage depletion allowance for investments in natural resources⁶⁷ relates directly to waste reduction policy.

The percentage depletion allowance alters the preference between extraction and use of virgin materials as compared to the recycling of used materials. Because the extraction, refining, and processing of virgin materials typically generates greater amounts of waste materials than recycling of used materials, the percentage depletion allowance again becomes relevant to waste management and reduction.

The percentage depletion allowance emerges from an elaborate network of rules relating to the depletion of natural resources. Despite the complexities, the system reduces to two fundamental systems of depletion, namely cost depletion and percentage depletion.

Cost depletion⁶⁸ is designed to recover the taxpayer's interest in an exhaustible natural resource at the rate at which it is being extracted. There are virtually no distinctions among the types of resources being exploited. The depletion of timber is complicated, but only by the obvious fact that trees propagate and grow. Because of such growth, the taxpayer's depletable investment in each unit of standing timber tends to diminish with the passage of time. Aside from timber, however, the cost depletion system is essentially straightforward and has engendered little audit controversy or legislative concern.

By contrast, percentage depletion tends to be exasperatingly complex because of Congress's obvious ambivalence toward the system.⁶⁹ Percentage depletion simply means a deduction based on a percentage of the sale price. The sales may bar actual sales or constructive sales. Vertically integrated resource companies use constructive sales prices, as when a copper company mines the ore, processes it, and makes a final product like copper wire.⁷⁰

For example, domestic oil and gas extracted and sold by a so-called independent producer is depletable at a rate of fifteen per-

⁶⁷ I.R.C. §§ 611-613A.

⁶⁸ *Id.* §§ 611-612. To illustrate cost depletion, if a taxpayer paid \$10,000 for a mine containing 100,000 tons of coal, the taxpayer could claim a ten cent deduction (\$10,000 divided by 100,000) for each ton of coal extracted and sold. *See id.*

⁶⁹ *Compare, e.g., id.* §§ 611-613 with *id.* §§ 57(a)(1), 291(a)(2), 613A, 613(b).

⁷⁰ *Id.* §§ 613, 613A.

cent.⁷¹ To illustrate, assume a small oil and gas producer pays \$10,000 for an estate that turns out to contain 10,000 barrels of oil. In the first year, the producer sells 1000 barrels at \$10 per barrel. She can claim a deduction of \$1500 (.15 x \$10 x 1000). In the second year, she also sells 1000 barrels, but the price jumps to \$20 per barrel. For the second year, the percentage depletion deduction rises to \$3000.

The key controversy about percentage depletion is that it is unrelated to the taxpayer's investment in her interest in the resource. If the taxpayer in the example had invested only \$1.00 in the entire history of the natural resource property, she could still claim a \$3,000 deduction for the second year. By contrast, the cost depletion system would allow the oil and gas operator only a \$1.00 depletion deduction over the life of the well for a \$1.00 capital investment. Taxpayers must elect cost or percentage depletion on a property-by-property basis, depending on which procedure yields the greater tax deduction for the particular year.⁷²

Congress has gradually pared back the percentage depletion system over the years in ways that need not be addressed here in detail, especially with respect to the oil and gas industry. Nevertheless, the fundamental potential windfall of being able to claim a deduction for exhausting natural resources in excess of one's investment in the resource remains.

From an environmental perspective, the deduction yields some truly perverse results because of the way the Code distributes the "windfall." In the case of hard-rock minerals in particular, different minerals qualify for deduction at dramatically different rates. The higher the rate, the better the taxpayer's vantage.

The average percentage depletion rate is 12.1 percent.⁷³ The highest rate, twenty-two percent, is granted to asbestos, uranium, lead, and mercury! Each of these minerals is notorious for its capacity to damage the human body, the environment, or both.⁷⁴ Moreover, EPA has taken specific steps to reduce the use of these substances and limit human exposure.⁷⁵ No legislative history underlies this curious

⁷¹ *Id.* § 613A.

⁷² Treas. Reg. § 1.169-1(a)(1) (as amended in 1972).

⁷³ Based on averaging the seven different rates set forth in I.R.C. § 613(b)(1).

⁷⁴ Ford, *Who Will Compensate the Victims of Asbestos Related Diseases?* *Manville's Chapter 11 Fuels the Fire*, 14 ENVTL. L. 465, 466-68 (1984); *EPA Sets Standards for Radiation from Active Uranium Mills*, TRIAL, Dec. 1983, at 13-14; *Lead: Assessing Its Health Hazards*, 2 HEALTH & ENVTL. DIG. 1 (1988); N. HUDDLE & M. REICH, *ISLAND OF DREAMS: ENVIRONMENTAL CRISIS IN JAPAN* 102-32 (1975) (telling the story of mercury poisoning in Minamata).

⁷⁵ All the minerals except lead are designated as hazardous air pollutants under the Clean

favoritism for such harmful materials in our tax laws. One can fairly ask whether these substances should not be reduced to the lowest rate or denied the percentage depletion deduction altogether, as in the cases of integrated oil and gas producers and transferees of proven oil and gas properties.⁷⁶

By disproportionately encouraging the extraction of minerals with known significant toxic characteristics, present tax laws clash with sound environmental policies. The preferential treatment of these minerals deserves review on the reasonable expectation that they would be mined less eagerly in favor of less destructive alternatives if their percentage depletion rates were reduced or eliminated. In addition, serious consideration should be given to determining how to balance appropriately the extraction of virgin resources as opposed to recycling used resources. The present structure of the Code does nothing to encourage recycling.⁷⁷

2. Feedstock Taxes and Superfund

This section gives a thumbnail sketch of the complex set of taxes on forty-nine chemical and petroleum products that provides the major revenue source of the Superfund to clean up old and abandoned hazardous waste sites.⁷⁸ Congress selected these petroleum and chemical substances as the original source materials, or feedstocks, for most processes and products that generate hazardous waste. The taxes, found in sections 4611, 4661, and, after 1986, 4671 of the Code, were designed to raise \$1.38 billion for the fiscal period 1980-85. The amount was to be supplemented by \$220 million from general revenues, for a total fund of \$1.6 billion.⁷⁹ Actual revenues were only \$863 million by the end of 1984 because of declining production of the taxed feedstocks.⁸⁰ Meanwhile, the estimates of costs to clean up hazardous waste sites continued to climb. By 1985, the General

Air Act, meaning that EPA has concluded that they are expected to increase mortality, serious irreversible illness, or incapacitating reversible illness. 42 U.S.C. § 7412(a)(1); 40 C.F.R. § 61.01(a). Lead is regulated as an ambient air pollutant, again based on health effects.

⁷⁶ I.R.C. § 613A(a), (c)(9) (1986).

⁷⁷ The Office of Technology Assessment is considering this issue. The results should be interesting.

⁷⁸ Superfund is a creation of Title II of CERCLA, 42 U.S.C. § 9601 (1982) as amended by SARA, 42 U.S.C. § 9601 (Supp. IV 1986), codified in various sections of the Internal Revenue Code. The expenditure of the Superfund monies is limited to hazardous waste response under § 111 of CERCLA. I.R.C. § 9507(c) (1986).

⁷⁹ H.R. REP. NO. 962, 99th Cong., 2d Sess. 317-18, *reprinted in* 1986 U.S. CODE CONG. & ADMIN. NEWS 3410-11.

⁸⁰ Viard, *Tax Issues Raised by Superfund Reauthorization*, 28 TAX NOTES 1026, 1026 (1985).

Accounting Office estimated total costs to be in the range of \$39 billion but possibly as high as \$100 billion.⁸¹ In response, Congress in 1986 increased the five-year revenue goal to \$8.5 billion.⁸²

The concept behind the feedstock taxes is to force the industries that presumably benefited in the past from the cheap and inadequate waste disposal practices that created the waste sites to shoulder the current cost of cleaning up those wastes. Unfortunately, the relationship between the particular tax and the environmental externalities from the particular material is acknowledged to be crude.⁸³ Although the debate in the mid-1980s on reauthorization of Superfund included discussion about this relationship, Congress only considered, but ultimately did not adopt, a direct tax on the hazardous wastes themselves.⁸⁴

C. Tax Treatment of Waste Treatment and Disposal

In two specific instances, Congress has modified the Code to adapt to environmental concerns. One involves the rapid amortization of certain pollution control facilities.⁸⁵ The other involves tax-exempt

⁸¹ *Id.*

⁸² ENVIRONMENTAL LAW REPORTER, SUPERFUND DESKBOOK 51 (1986). The shares of expected revenue from various sources break down as follows (in billions of dollars):

Petroleum tax	\$2.759
Feedstock chemicals tax	\$1.365
Imported chemicals tax	\$0.057
Environmental (general industry) tax	\$2.522
General revenues	\$1.250

Superfund originally taxed crude oil at 0.79 cents per barrel. CERCLA, 26 U.S.C. § 4611 (1982). The 1986 amendments increased this tax to 8.2 cents per barrel for domestic crude, and 11.7 cents for imported crude. I.R.C. § 4611(c). Twelve primary petrochemicals and thirty inorganic chemicals are taxed at rates varying between twenty-two cents per ton for potassium hydroxide and \$10.13 per ton for xylene. *Id.* § 4661(b).

⁸³ Viard, *supra* note 80, at 1028.

⁸⁴ *Id.* at 1029. Whatever their benefits from an economic incentive viewpoint, waste-end taxes tend to be an uncertain source of revenue because taxpayers will seek ways to reduce the amount of hazardous waste they generate. This may be environmentally constructive, but the revenue deterioration is not appropriate for a major tax designed to raise billions of dollars. There is also substantial concern that some firms will evade a waste-end tax by surreptitious disposal of wastes—so-called midnight dumping.

Congress heard proposals for other sources of revenue, including a much larger share for general revenues and a broad-based tax on industrial generators of hazardous waste. Although a broad-based tax on waste generators was not adopted, about one-quarter of the revenues for the five-year period 1986–90 will come from a new “environmental tax” related to corporate income taxes. *See supra* note 82.

⁸⁵ I.R.C. § 169.

financing of waste treatment facilities.⁸⁶ The former topic is fairly controversial. The latter has attracted little attention.

1. Amortization of Pollution Control Facilities

Section 169 of the Code allows certified pollution control facilities to be amortized over a period of sixty months, beginning with the month following acquisition or completion, or with the next taxable year. The provision is elective, and is designed to induce private industry to commit funds for anti-pollution facilities that "generally do not result in any increase in the profitability of a plant."⁸⁷

In order to qualify for this rapid write-off, the facility has to be certified by federal and state authorities as conforming with prescribed standards for the prevention, abatement, or control of air or water pollution.⁸⁸ The facility must not significantly change the output capacity or useful life of the taxpayer's plant, nor may it reduce the plant's operating costs.⁸⁹ The facility's costs must also not be repaid by the recovery of wastes,⁹⁰ and, if the facility has a useful life of over fifteen years, the portion of the investment that can be written off under section 169 is reduced proportionately.⁹¹

For example, if the facility's useful life were thirty years, one-half of its cost could be written off in five years (sixty months) and the rest could be written off over the normal useful life. The election to amortize the improvement over a sixty-month period is terminable at will.⁹² Section 169 does not apply if the facility might otherwise have been installed, even though it is certified as useful for combatting pollution and does not add significant value to the plant.⁹³

What Congress gave in section 169 it has partly taken back in various ways. Specifically, section 291(a)(5) provides that, in the case of a corporation, the amortizable basis of pollution control facilities under section 169 must be reduced by twenty percent, say from \$1

⁸⁶ I.R.C. §§ 103, 142(a)(5), (6), (10).

⁸⁷ S. REP. NO. 552, 91st Cong., 1st Sess., reprinted in 1969-3 C.B. 423, 580. See McDaniel & Kaplinsky, *The Use of the Federal Income Tax System to Combat Air and Water Pollution: A Case Study in Tax Expenditures*, 12 B.C. INDUS. & COM. L. REV. 351 (1971); Reese, *The Tax Implications of Pollution Control Investments After ERTA and TEFRA*, 31 OIL & GAS TAX Q. 338, 376 (1982).

⁸⁸ Treas. Reg. § 1.169-2(a) (as amended in 1970).

⁸⁹ I.R.C. § 169(d)(1)(c) (1986); Treas. Reg. § 1.169-2(b)(2)(ii), 2(d).

⁹⁰ I.R.C. § 169(e) (1986). That is, if the facility recovers a useful material (for example, silver from photographic coating wastes), the value of the recovered material cannot equal or exceed the annualized cost of the facility itself.

⁹¹ *Id.* § 169(f)(2).

⁹² *Id.* § 169(c).

⁹³ See Treas. Reg. § 1.169-2(d).

million to \$800,000. Section 291(c)(1) in turn, however, subjects that twenty percent to depreciation under section 168. This juxtaposition evidences a surprising ambivalence on the part of Congress, and adds a nuisance to already elaborate bookkeeping requirements. In general, Congress designed section 291 to limit certain exceptional tax benefit claims by corporations. This populist limitation merely invites taxpayers to change the form in which business is conducted, which is clearly an undesirable outcome.⁹⁴

In addition, the alternative minimum tax⁹⁵ applies to the accelerated amortization of such pollution control facilities. The base on which the tax falls, if at all, is the amount actually claimed under section 169 minus the significantly smaller amount that the taxpayer would have been entitled to had he or she written off the asset under section 168(g).⁹⁶ That tax applies at a twenty-one percent rate for individuals and twenty percent for corporations.⁹⁷

On one hand, section 169 provides a healthy incentive to install facilities that will not have commercial value because five-year amortization is rapid compared to the usual seven to twenty-seven and a half year depreciation system that would otherwise apply.⁹⁸ On the other hand, a well-sheltered taxpayer might find the possibility of an alternative minimum tax an undue burden. In addition, it is not clear that section 169 is available if one party leases it to another.⁹⁹ The Internal Revenue Service (IRS) or Congress should clarify this last question.

Section 169 is subject to criticism on several grounds: it merely softens the blow of doing what regulators require anyway, but does not help taxpayers running tax losses; it only reaches some pollution; and, it fails to encourage use of less polluting fuels. The most serious criticism of section 169 is its denial in cases where it can add value or profit.¹⁰⁰ Congress premised that denial on the existence of the now repealed investment tax credit (ITC), which made section 169 inferior to the combination of cost recovery under section 168 plus the former ITC.¹⁰¹

⁹⁴ For example, using a partnership consisting of individuals acting as lessors to avoid I.R.C. § 291(c).

⁹⁵ I.R.C. § 55 (1986).

⁹⁶ *Id.* § 56(a)(5).

⁹⁷ *Id.* § 55(b)(1).

⁹⁸ *See id.* § 168(e).

⁹⁹ Reese, *supra* note 87, at 376-77.

¹⁰⁰ Millett, *Pollution and The Federal Revenue Code*, 8 WAKE FOREST L. REV. 535, 549 (1972).

¹⁰¹ *See generally* Reese, *supra* note 87; Moore & Streuling, *Pollution Control Devices: Rapid Amortization Versus the Investment Credit*, 52 TAXES 25 (1974).

Since passage of the 1986 Code, pollution control facilities have generally been favored under section 169 because recovery periods¹⁰² are substantially longer for virtually all classes of tangible property,¹⁰³ making sixty-month amortization all the more appealing. For example, much public utility property such as coal-fired power plants, moved from being fifteen-year property¹⁰⁴ to being twenty-year property.¹⁰⁵ Also, Congress eliminated the ITC, thereby reducing the prior ten percent subsidy for acquiring industrial hardware, and further widening the disparity between pollution control equipment and other hardware.¹⁰⁶

An increasingly important restraint on section 169 arises from Congress's decision to apply it only to plants that were in operation before January 1, 1976. Because of this cutoff, the growing population of new plants that have come onstream after 1975 gains no benefit from section 169. As a result, section 169 fails to create an incentive to build new plants that cost more but provide better control of toxic wastes for that increased cost.¹⁰⁷

Commentators have criticized the provision for its oversimplified view of the competitive advantages involved.¹⁰⁸ Pollution control agencies already account for the extra expense of retrofitting equipment in old plants, relative to comparable equipment in new plants, when they set pollution control standards, allow construction permits, and determine who will have enforcement actions brought against them.¹⁰⁹ Even if an old plant must spend more money to

¹⁰² See I.R.C. § 167 (1986).

¹⁰³ See *id.* § 168.

¹⁰⁴ *Id.* § 168(c)(2)(E) (replaced in 1986).

¹⁰⁵ *Id.* § 168(e)(1); Treas. Reg. § 1.167(a)-11, class 49.14 (1980).

¹⁰⁶ Tax Reform Act of 1986, Pub. L. No. 99-514, 100 Stat. 2085 (1986).

¹⁰⁷ The January 1, 1976 cutoff was based on the Senate's view that the cost of upgrading old facilities is greater than the cost of redesigning new ones. See Reese, *supra* note 87, at 362-74; S. REP. NO. 552, 91st Cong., 1st Sess. 249 (1969).

¹⁰⁸ See, e.g., Givelber & Schaffer, *Section 169 of the Internal Revenue Code: An Income Tax Subsidy for the Control of Pollution*, 14 ARIZ. L. REV. 65 (1972).

¹⁰⁹ The Clean Water Act, for example, clearly states different technology criteria and cost-consideration criteria for existing sources compared to new sources. Compare 33 U.S.C.A. § 1311(b)(1)(A), (b)(2)(A) (1983 & West Supp. 1988) with 33 U.S.C.A. § 1316. For a general discussion of technology and cost considerations in setting discharge limits under the Clean Water Act, see W. RODGERS, ENVIRONMENTAL LAW: AIR AND WATER § 4.29 (1986). The adage that old plants spend more money complying with such pollution laws than new plants is true, however, only when comparing plants within the same industry. Section 169 cannot differentiate between industries with high pollution control costs and competing industries that may be able to comply more cheaply. For example, it would favor an old steel mill over a new, less polluting, plastics plant even though both make parts for automobiles.

control pollution than would a new plant, the government should reduce the subsidy to the new plant proportionately instead of refusing to subsidize it at all. To the extent these subsidies are intended to alleviate the hardships that accrue to investors in old plants when the legislature enacts tougher pollution control laws, such hardships fall on more recent plants as well as much older ones. In addition, section 169 has the inherent problem of propelling firms in the direction of using end-of-pipe methods to control pollution from less efficient facilities rather than making process changes to reduce raw waste generation. The firm that changes fuels or modifies processes of production to minimize pollution receives no special subsidy even though such changes may be more efficient at reducing pollution than buying new waste treatment equipment.

In addition to providing no incentive to build new plants with better waste controls, section 169 is arguably overbroad in that the EPA interprets it to include equipment permissively installed as well as equipment required to meet legal standards.¹¹⁰ While the EPA view seems sound, it may be subject to abuse by the states. Section 169(d)(2)(A) defines a certified pollution control facility as a facility that a state certifying authority declares to be installed or acquired consistent with that state's program for pollution control.¹¹¹ It does not require states to have mandated the investment through regulation or enforcement. Consequently, section 169(d)(2)(A) invites states to encourage industrial relocation by having broad, permissive programs that allow maximum exploitation of section 169's benefits.

Congress should explicitly amend the Code to conform to the EPA view in order to encourage voluntary control of pollution beyond legal minimums. The tax regulations will prevent taxpayer abuse of the system, so the only danger to a broad allowance for permissively installed pollution control may be a slight loss of revenue. Although section 169 is not pegged to the extent of reduction of pollution, but to capital invested,¹¹² the backstop of action consistent with government programs should be enough.

Another objection to section 169 asserts that it is technically regressive in that it gives a greater stimulus to taxpayers in higher

¹¹⁰ Compare Pollution Control Facilities: Guidelines for Certification, 36 Fed. Reg. 19,132 (1971) with H.R. REP. NO. 413, 91st Cong., 1st Sess. 197 (1969).

¹¹¹ I.R.C. § 169(d)(2)(A).

¹¹² *Id.* § 169(a).

tax brackets, and fails altogether to stimulate non-taxpaying operators such as municipalities or companies with operating loss carryovers.¹¹³ Although these entities may desperately need financial subsidies, the section gives them no help. Congress should consider supplementing section 169 with a refundable credit or a direct subsidy for financially needy owners and operators.¹¹⁴

Section 169 fails to get to the heart of the matter of reducing toxic wastes. It encourages end-of-pipe equipment over process changes and new materials, and it gives no help to the firms that need it most: those running tax losses. It also creates no incentive for post-1975 plants to operate more cleanly. Even if some states could use section 169 to promote permissive investment in extra pollution control with a federal subsidy, for most companies, section 169 merely subsidizes legally mandated pollution control investments. Overall, section 169 typifies the haphazard federal approach toward coordinating tax and environmental policies and highlights the need for much more thoughtful and systematic integration of taxation with environmental quality goals.

2. Tax-exempt Financing

Private activity bonds, such as corporate bonds, produce taxable interest.¹¹⁵ Bonds issued to finance pollution control facilities in the hands of private owners are, therefore, *prima facie* incapable of producing tax-exempt interest. Section 141(d), however, exempts such bonds if they are "qualified bonds."¹¹⁶ Qualified bonds, in turn, include "exempt facility bonds."¹¹⁷ Exempt facility bonds include those for sewage and solid waste disposal facilities and hazardous waste disposal facilities.¹¹⁸ Except for the three types of facilities just mentioned, an exempt facility must serve regularly for general public use.¹¹⁹

¹¹³ See I.R.C. § 172 (1986).

¹¹⁴ See generally Reed, *Economic Incentives for Pollution Abatement: Applying Theory to Practice*, 12 ARIZ. L. REV. 511 (1970) (preference for effluent charge system).

¹¹⁵ I.R.C. § 103(b) (1986).

¹¹⁶ *Id.* § 141(d).

¹¹⁷ *Id.* § 141(d)(1)(A).

¹¹⁸ *Id.* § 142(a)(5), (6), (10). It should be noted that the 1986 Tax Reform Act substantially rewrote the Code's provisions on tax exempt bonds. The provisions of interest to us here, however, were modified only slightly, so regulations and precedents established under the pre-1986 Code remain valid.

¹¹⁹ Treas. Reg. § 1.103-8(a)(2) (as amended in 1983).

The Treasury regulations carefully and elaborately define facilities that qualify for the exempt facility exemption.¹²⁰ The regulations define sewage disposal facilities and solid waste disposal facilities as property used for the collection, storage, treatment, utilization, processing, or final disposal of sewage or solid waste.¹²¹ Pursuant to these regulations, a facility that recycles solid wastes can qualify as a solid waste disposal facility if solid waste accounts for at least sixty-five percent of the waste handled.¹²² Even if this type of facility "operates at a profit," it can still qualify if the solid waste it treats or disposes is useless or unwanted material that has no market value and that no one is willing to purchase.¹²³

In addition to sewage and solid waste facilities, the regulations define air and water pollution control facilities as serving the public good and thus fulfilling the public use requisite.¹²⁴ A property is considered an air or water pollution control facility if it is used wholly or partly to abate pollution by removing, altering, disposing, or storing the contaminant, and if the expenditure would not have been made except for the purpose of pollution control.¹²⁵ To allow for depreciation, the expenditure must also satisfy the requirements of section 167, namely, that the property have a limited physical life and be held for use in a trade or business or for the production of income.¹²⁶ In addition, a federal, state, or local agency must certify that the facility controls air or water pollution or that it meets federal, state, and local standards to control air and water pollution.¹²⁷

It does not matter if the facility also engages in reprocessing the waste, generation of energy, or other activities ancillary to waste

¹²⁰ *Id.* § 1.103-8(f), (g).

¹²¹ *Id.* § 1.103-8(f)(2)(i), (ii).

¹²² *Id.* § 1.103-8(f)(2)(ii)(c).

¹²³ *Id.* § 1.103-8(f)(2)(ii)(b). Since this regulation was written, the definition of solid waste has been amended and recodified at 42 U.S.C. § 6903(27) (1982). The amended definition of solid waste is somewhat broader than the original definition.

¹²⁴ Treas. Reg. § 1.103-8(g)(1) (as amended in 1983).

¹²⁵ *Id.* § 1.103-8(g)(2)(i)(b), (ii), (iii).

¹²⁶ *Id.* § 1.103-8(g)(2)(i)(a) (citing 26 U.S.C. § 167(a) (1982)).

¹²⁷ *Id.* § 1.103-8(g)(2)(i)(a), (b). Expenditures for property are sufficient to fulfill the requirements of subdivisions (iii) and (iv) as long as the property will be used for the control of pollution, even if it serves functions other than just the control of pollution. If, however, a significant purpose other than the control of pollution will be served, only the expenditures spent for pollution control will satisfy the test of this subdivision. A significant purpose is defined as one that produces "an increase in production or capacity, or in the material extension of the useful life of a manufacturing or production facility or part thereof." *Id.* § 1.103-8(g)(2)(v).

disposal. Under the temporary Treasury rules, however, the portion of the cost of the solid waste disposal facility that is actually used in the disposal process is allocable to solid waste disposal for section 141(d) purposes.¹²⁸

The foregoing regulations contain no surprises. They basically allow a subsidy by removing a tax on income from capital for establishing two forms of waste removal facilities. This innocuous provision does not seem to merit much debate. Its effectiveness, however, is questionable. Many waste removal facilities will probably be built anyway, and the subsidy may not be sufficient to stimulate increased construction of such facilities where they are needed. It should be noted that the types of wastes contemplated by section 141(d) are much more extensive than the toxic wastes that are the focus of this Article, and include such items as household waste and discarded newspapers.

D. Tax Treatment of Post-disposal Liabilities

The federal income tax implications of liabilities that arise after disposal of toxic wastes have assumed major significance for both revenue and environmental policies. Parties responsible for existing waste site cleanup under Superfund face multi-billion dollar liabilities, prompting increased attention of state governments, banks, insurance companies, and real estate developers, as well as industrial concerns, to the financial arrangements for potential waste-related liabilities. Although the tax implications of such liabilities raise perhaps the most important policy questions in this Article, analysis of these questions must inevitably focus on specific tax accounting questions.

This section begins with a survey of tax accounting concepts, and then moves to the implication of denying taxpayers deductions for setting aside money to take care of liabilities they will face in the future. As will be seen, the one bright spot for tax policy is the special treatment of nuclear decommissioning costs. The final elements of this section concern the tax incentives for forming under-capitalized subsidiaries to carry on environmentally risky activities and the possibility of using casualty insurance as an alternative to reserves for future liabilities.

¹²⁸ Temp. Treas. Reg. § 17.1(a) (1975).

1. Background on Accrual Method Deductions and Reserves for Future Expenses

The cost of cleanup and compensation for injuries attributed to hazardous waste has generated more discussion and controversy in the last ten years than the regulation of the wastes themselves.¹²⁹ In RCRA,¹³⁰ Congress foresaw the problem of contingent future liabilities for current waste disposal practices, and enacted a requirement for bonding or insurance for liabilities and clean-up costs occurring *after* the closure of a waste disposal site.¹³¹ By 1980, Congress had become aware of problems throughout the country with old, often abandoned, hazardous waste sites, and passed the Superfund law to marshal national resources to clean them up.¹³²

Superfund has had its most profound impact on the actions of parties who are potentially responsible for clean-up costs at particular sites.¹³³ The potentially responsible parties, especially the industrial generators of toxic wastes, now seek strategies and legal arrangements that will reduce, absolve, or shift their liability. In many cases, however, such avoidance strategies are impossible or impractical. The potentially responsible parties therefore also seek ways to accumulate capital sufficient to cover hazardous waste liabilities that they cannot avoid.

The fundamental issue that arises with respect to post-disposal liability is whether and to what extent a taxpayer should be allowed to claim a tax deduction for expenditures that will be paid out in some future year.¹³⁴ The issue of deductibility of future expenses relates primarily to taxpayers on the accrual method, the system used by most major business taxpayers and manufacturers.¹³⁵

¹²⁹ Futrell, *Hazardous Wastes and Toxic Substances: Lessons from Superfund, RCRA, and other Environmental Laws*, 24 HOUS. L. REV. 125 (1987); see also Lucero, *Responses to J. William Futrell*, 24 HOUS. L. REV. 143, 148 (1987); *Special Issue: Managing Liability from Hazardous Waste*, 25 HOUS. L. REV. 715-977 (1988).

¹³⁰ 42 U.S.C. §§ 6901-6987 (1982 & Supp. IV 1986).

¹³¹ 42 U.S.C. § 6924(a)(6), (t)(1) (Supp. IV 1986), implemented by rules at 40 C.F.R. §§ 264.140-264.151 (1987).

¹³² CERCLA, 42 U.S.C. §§ 9601-9659 (1982 & Supp. IV 1986).

¹³³ The law enumerates four classes of people legally liable for cleanup: current owners and operators of the site; owners and operators at the time of waste disposal; generators of the wastes at the site; and those who transported the wastes to the site. 42 U.S.C. § 9607(a). Collectively, they are commonly known as the "potentially responsible parties."

¹³⁴ The following materials deal with an arcane topic of tax accounting. Every attempt is made to simplify the concepts, many of which may appear baffling to the uninitiated reader.

¹³⁵ I.R.C. § 446(c)(2) (1982).

Under the accrual method, a taxpayer reports income when all the events fixing the right to payment have taken place (for example, when an order of goods is shipped out) regardless of when actual payment is due or received.¹³⁶ Likewise, a deduction is available when all the events fixing the duty to make a payment in some future year have taken place.¹³⁷ For example, if removing the overburden above a mineral deposit to be stripmined triggers a duty to pay money in order to rehabilitate the land, a deduction may be available when the overburden has been removed even though the area may not be reclaimed until well in the future.¹³⁸

Under the cash method of accounting, by contrast, taxpayers do not report income until it is actually received, and they cannot claim deductions until they are actually paid. To the extent that the payments produce values that last into future years, however, they must be proportionately "capitalized" (suspended) and written off in such future years.¹³⁹

The preceding summary of the accrual and cash methods describes financial accounting¹⁴⁰ more accurately than it does tax accounting. Over the years, tax accounting has generally drifted away from the fairly pure world of financial accounting, usually in favor of the IRS and against the accrual method taxpayer. In other words, the tendency has been to put accrual method taxpayers onto the cash method if doing so raises taxes.

The government has used three major tools to shift the balance in its favor. First, section 446(b) of the Code authorizes the Commissioner of Internal Revenue to impose his or her own method of accounting on the taxpayer if the taxpayer's method is found to distort income or to fail to reflect income accurately.¹⁴¹ The Commissioner has used this weapon with great success to force prepaid receipts to be taxed on receipt, thereby effectively putting accrual method taxpayers on the cash method.¹⁴² Second, the government has applied the so-called claim-of-right doctrine to tax accrual method taxpayers on income they have earned and exercise dominion

¹³⁶ *Spring City Foundry Co. v. Commissioner*, 292 U.S. 182, 184-85 (1934).

¹³⁷ *Treas. Reg.* § 1.446-1(c)(ii) (1988).

¹³⁸ *Ohio River Collieries Co. v. Commissioner*, 77 Tax Ct. Rep. (CCH) 1369 (1981).

¹³⁹ *See* I.R.C. § 263 (1986).

¹⁴⁰ The term refers to accounting practice applied by CPAs reporting the annual financial results of enterprises, for the benefit of creditors and owners of the enterprise.

¹⁴¹ Such actions by the Commissioner of Internal Revenue cannot be reversed unless they constitute an abuse of discretion, which is a difficult standard for taxpayers to meet. *See Lucas v. American Code Co.*, 280 U.S. 445, 449 (1930), *rev'g* 30 F.2d 222 (2d Cir. 1929).

¹⁴² *See* B. BITTKER, *FEDERAL TAXATION OF INCOME, ESTATES AND GIFTS* § 105.1.6 (1981).

over, even though the earnings are forfeitable and hence not formally accruable.¹⁴³ Third, the economic performance requirement embodied in section 461(h) of the Code¹⁴⁴ denies deductions for future disbursements until the taxpayer receives services, property, or use of property for which the taxpayer has contracted. This triad of forces has made tax commentators cynical about Congress's willingness to distort coherent accounting principles in order to accelerate the flow of revenue¹⁴⁵ and makes accrual method taxpayers understandably feisty about further incursions on their tax accounting territory.

The tax treatment of general reserve accounting shows how Congress has disrupted traditional accounting practices. General reserve accounting is a method that accrual method taxpayers have traditionally used to establish reserves to cover future expenses. The method is best described by example:¹⁴⁶

Mr. Scheussler sells home furnaces. The price of a furnace is \$550. In connection with selling a furnace, Mr. Scheussler promises to turn off the furnace in the spring and to clean and start it each fall for five years. He estimates the cost of doing so at \$10 per year, that is, \$50 over the five-year period. Accordingly, in the year of the sale, he reports \$550 of gross income on the sale of each furnace, but offsets that figure by \$50, his "reserve" for future expenditures in connection with each furnace. Each year in which he actually services the furnace, he will add \$10 to income, but will subtract the actual cost of servicing the furnace (\$10.50 in the first year, \$7.50 in the second year, etc.).

As the example shows, the reserve method reflects his income accurately in that it appropriately reduces what would otherwise be inflated income (\$550) in the first year by the anticipated future costs of the contract. Accountants endorse the reserve method because of its levelling effect, which creates a steadier pattern of income (or loss) and better matches the timing of income and deductions. For example, if Mr. Scheussler simply reported \$550 in year one and a \$10 loss in years two through six, the outcome would be silly because the transactional event is the sale of a furnace at a net gain of \$500 (less its cost to him), not a large profit in one year and a series of losses in succeeding years.

¹⁴³ See *North Am. Oil Consol. v. Burnet*, 286 U.S. 417, 424 (1932).

¹⁴⁴ Effective in 1985 and later years.

¹⁴⁵ See, e.g., Malman, *Treatment of Prepaid Income—Clear Reflection of Income or Muddied Waters*, 37 TAX L. REV. 103 (1981); Cunningham, *A Theoretical Analysis of the Tax Treatment of Future Costs*, 40 TAX L. REV. 577 (1985).

¹⁴⁶ See *Scheussler v. Commissioner*, 230 F.2d 722 (5th Cir. 1956).

Although general reserve accounting is accurate, taxpayers can manipulate the method by shrewdly creating liabilities that will not call for payment until far in the future.¹⁴⁷ The introduction of section 461(h) in 1984 therefore eliminated the general use of reserves for future expenses. As a result, the only way for an accrual method taxpayer to deduct liabilities (whether or not denominated reserves) for future expenditures is to undertake the activity that produces the liability (in our example, clean and fire up the furnace) or take advantage of some *specific* reserve accounting provision that expressly allows such a deduction despite the general restriction imposed by section 461(h).¹⁴⁸

2. Environmental Policy Implications of Lack of General Reserve Accounting and the Economic Performance Limitation

The unavailability of general reserve accounting produces conflicting considerations for the taxpayer. To illustrate the issues, a hypothetical taxpayer may be useful. Assume that the taxpayer is an incorporated junkyard that uses the accrual method. The company is aware that its activities, such as piling up old batteries and allowing associated toxins to accumulate, will almost surely result in eventual contamination of the local groundwater, with consequent state intervention, possible fines, and a need to clean up the toxic wastes it has collected.

Case 1:

Taxpayers who are on the accrual method in theory qualify for a deduction if they can show that their actions either have resulted in a fixed liability to correct their malfeasance or have rendered the payment schedule so clear that a current deduction is permissible.¹⁴⁹ The pure accrual method thus encourages the junkyard to solidify its liability so that it can report the deduction immediately. Such an incentive could induce the junkyard operator to engage in destruc-

¹⁴⁷ See, e.g., *Mooney Aircraft, Inc. v. United States*, 420 F.2d 400, 409–10 (5th Cir. 1969) (current deductibility of “bonds” due 20 years in the future successfully challenged under § 446(b) power).

¹⁴⁸ Later in the Article, we discuss several such specific Code provisions that have special significance from an environmental perspective. See *infra* notes 158–67 and accompanying text.

¹⁴⁹ This is the result under traditional, or financial, accrual accounting, shorn of the economic performance requirement of I.R.C. § 461(h).

tive behavior, reasoning that "it's deductible" although not payable until well into the future.¹⁵⁰

Solidifying the deduction, however, may be taken as an admission of guilt, assuming the taxpayer's income tax records are accessible. For publicly traded companies, the solidified deductions may need to be reported in securities filings.¹⁵¹ On one hand, the liability to correct the behavior may be largely avoided if it is so far in the future as to be trivialized by discounting it to its present value.¹⁵² On the other hand, if the taxpayer is a corporation, liquidating the corporation will generally trigger a tax liability that will reverse the prior deduction.¹⁵³

Claiming the deduction does not assure that the taxpayer will fund the liability by setting aside money to make the indicated future payment. Should the issue be the subject of an IRS audit, it is conceivable that the taxpayer and the IRS could enter into a so-called closing agreement¹⁵⁴ under which the deduction would be allowed if cash payments were made that corresponded to the deduction. That speculation would not affect pre-audit behavior.

Case 2:

As a result of section 461(h) of the Code, accrual method taxpayers cannot deduct the liabilities for correcting their malfeasance until the correction is made. The implication for our junkyard is that, unless and until the cleanup is undertaken, it cannot report a deduction. Thus, the company has no incentive to save for clean-up expenses or to pay insurance premiums to generate a cash reserve. Once cleanup becomes physically feasible, an incentive arises to clean up because doing so will produce a current tax deduction. If the property is so far gone that the correction would be deemed a

¹⁵⁰ In a high interest rate environment, however, the discounted future cost of remedying the malfeasance could be lower than the tax benefit of the current legislation. If the taxpayer were a corporation paying the general top rate of 34% of taxable income, the value of the deduction would be 34% of the reported amount. For example, a \$1,000 accrued deduction reduces current year taxes by \$340. The further into the future the actual disbursement is pushed, the lower its real present cost. The higher the interest rate applied to discount a future disbursement, the lower its present value cost will be.

¹⁵¹ See generally *Resource Materials: Fraud, Inside Information, and Fiduciary Duty under Rule 10b-5*, A.L.I. (1976).

¹⁵² See *supra* note 150.

¹⁵³ See *Hillsboro Nat'l Bank v. Commissioner* (United States v. Bliss Dairy, Inc.), 460 U.S. 370 (1983). This would not be true if it were liquidated into a parent corporation under I.R.C. § 332 (1986).

¹⁵⁴ See I.R.C. § 7121 (1986).

rehabilitation, however, that expense would have to be capitalized.¹⁵⁵ The Code enhances the incentive because the taxpayer may be able to borrow money, with associated interest expense deductions, to perform the job.¹⁵⁶

Case 3:

The facts are the same as Case 2, but the taxpayer is on the cash method. The same results occur as in Case 2 above because the Code allows no deduction until the year of payment, or later if and to the extent performance occurs in a later year.¹⁵⁷ For example, assume a corporate taxpayer on the cash method contracted with an outside company to clean up its toxic wastes at a price of \$1 million. The contract called for paying the \$1 million in 1990, but for doing half the cleanup in 1990, and half in 1991. The corporation may deduct only \$500,000 in 1990; the balance may not be deducted until 1991.

Case 4:

Suppose the taxpayer is subjected to fines or penalties for its violations. The result is no deduction.¹⁵⁸ Denial of a tax benefit is appropriate because allowing a deduction would weaken the sting of the fines or penalties.

Under present tax law, environmentally destructive behavior that creates a clean-up duty has little tax significance. Regardless of a taxpayer's method of accounting, the Code allows no tax deduction until the year the cleanup occurs. In general, this result is reasonable, because it offers no tax incentive for destructive behavior, and it creates a tax benefit for engaging in an actual cleanup. It does nothing, however, to stimulate the taxpayer to set aside funds to cover the eventual liabilities its actions will generate.

¹⁵⁵ The deduction would be available under § 162(a). Section 263 might force capitalization if the correction made the property suitable for a new use vis-a-vis its status when acquired by the taxpayer. *Compare* *Midland Empire Packing Co. v. Commissioner*, 14 Tax Ct. Rep. (CCH) 635 (1950) with *Mt. Morris Drive-In Theater Co. v. Commissioner*, 238 F.2d 85 (6th Cir. 1956).

¹⁵⁶ I.R.C. § 163 (1986).

¹⁵⁷ *Id.* § 263.

¹⁵⁸ *Id.* § 162(f).

3. The Special Case of Nuclear Decommissioning Costs

One of the rare exceptions to the general rule against deductions for adding to reserves for future expenses appears in section 468A.¹⁵⁹ This provision permits taxpayers to deduct actual payments made to reserve funds to pay for future costs of decommissioning nuclear power plants. Section 468A(b) limits such payments to the lesser of decommissioning deductions claimed for ratemaking purposes or a "ruling amount" individually approved by the IRS as an accurate reflection of future expenses.¹⁶⁰ The earnings of each nuclear decommissioning fund are taxable at top corporate rates as if the fund were a domestic business corporation.¹⁶¹ The fund is carefully circumscribed so as to be usable for no other purpose and to assure that it terminates when its purpose is achieved.¹⁶²

From a tax accounting perspective, section 468A is an enlightened provision because it matches income and expenditures over time, while limiting the deduction to actual payments into the fund. Moreover, it seems compatible with environmental goals because it encourages adequate funding for the potentially enormous costs of shutting down obsolescent nuclear power plants, a result that is preferable to the risk that the public might have to bear the eventual cost. If it has any weakness, it may be that section 468A needs to be tightened somewhat to make the fund immune from invasion by the taxpayer or its creditors. Its enlightened tax treatment for accumulating capitol for cleanup makes section 468A a good model for funding liabilities for future disbursements to rectify unavoidable environmental damage from accepted, legitimate business activities generating and disposing hazardous wastes.

4. The Special Case of Solid Waste Reclamation Costs

Section 468 is a complex section relating to mine closing and solid waste reclamation. The provision relating to mines parallels that for solid waste reclamation. The core concept of these section 468 provisions is to grant taxpayers a current deduction for the costs of reclaiming waste sites and closing mines.¹⁶³ The amount of the deduction is calculated by a sinking fund approach, the effect of which

¹⁵⁹ *Id.* § 468A; *see also* Treas. Reg. § 1.468A-0 to -8 (1988).

¹⁶⁰ *See* I.R.C. § 468A(d)(2) (1986) for the definition of the term "ruling amount."

¹⁶¹ *Id.* § 468A(e).

¹⁶² *Id.*

¹⁶³ H.R. CONF. REP. NO. 861, 98th Cong., 2d Sess. 875 (1984) (referring to new I.R.C. § 468).

is to grant relatively smaller tax deductions in the early years to accommodate growth of the reserve funds that resulted from the taxpayer's contributions to the fund over the years.¹⁶⁴

No actual payment into the reserve is needed in order to claim the deduction. The deduction is permissible, however, only if the reclamation involves a property reclaimed under a permit issued pursuant to the Solid Waste Disposal Act as amended by RCRA,¹⁶⁵ or similar federal, state, or local laws. The Code excludes any waste site that a taxpayer disturbs after it is listed on the National Priorities List (NPL) under section 105 of CERCLA.¹⁶⁶ This exclusion has the effect of barring a current deduction for response or remediation costs required under the Superfund program for NPL sites, and thus might encourage private site cleanup to preempt listing of the site on the NPL.

Mine closing activities must be conducted in accordance with a reclamation plan submitted pursuant to sections 511 or 528 of the Surface Mining Control and Reclamation Act of 1977¹⁶⁷ and made part of a surfacing mining and reclamation permit granted under Title V of that Act. Alternatively, the closing may be conducted pursuant to a plan submitted under a substantially similar state or federal law containing permit requirements.¹⁶⁸ The Code delegates the power to control the nature of the reclamation or closing activity to those closest to the scene, but local control can result in a lack of uniformity among the states.

In the worst case, a well-intentioned mining operation that accumulated cash reserves for eventual closing costs would get no current deduction because it failed to qualify under a rigorous regimen. In contrast, a taxpayer that did not intend to comply with actual closing requirements would get a current deduction for an act it never performed because it formally complied with a relaxed state standard. Eventual nonperformance would be punished by reporting the reserve as gross income in the year of nonperformance, but the tax cost of doing so might be minor because the burden arises so far in the future. A requirement that the reserve be funded and escrowed

¹⁶⁴ For a general explanation of the sinking-fund concept, see M. CHIRELSTEIN, *FEDERAL INCOME TAXATION, A LAW STUDENT'S GUIDE TO THE LEADING CASES AND CONCEPTS* ¶ 6.08 (1988).

¹⁶⁵ Codified as amended at 42 U.S.C. §§ 6901-6987 (1982 & Supp. IV 1986) (latest codification after 1984 amendments). *See also* I.R.C. § 468(d)(2)(B) (1986).

¹⁶⁶ 42 U.S.C. § 9605 (1986); I.R.C. § 468(d)(2)(B)(ii) (1986).

¹⁶⁷ 30 U.S.C.A. §§ 1201-1328 (1986).

¹⁶⁸ I.R.C. § 468(d)(2)(A)(ii).

would solve this problem by matching cost contributions to the escrow account with the permissible deductions.

The mine closing and solid waste reclamation deduction is a sophisticated form of reserve accounting, but it fails to require actual contributions to fund the reserve. As such, it suffers a serious weakness, given the possibility that the taxpayer may be defunct by the time the duty to pay actually arises. It is good tax accounting but arguably offends public policy.

5. Corporate Tax Provisions Relating to Undercapitalized Subsidiaries

A major practical problem involved in abstractions about allocating the burden of liabilities associated with toxic wastes is the waste producer's ability to pay. State corporate laws are notorious for allowing minimal capitalization of corporations. The only firm corporate law limitations involve prohibitions on paying dividends that would render the payor corporation insolvent.¹⁶⁹

Rational business corporations engaged in environmentally risky activities will, all things being equal, isolate those activities in separate subsidiary corporations. As a matter of general law, courts will not impute to the parent the corporate liability of a subsidiary. Nevertheless, a subsidiary is considered an asset of the parent that can be reached by a judgment creditor of that parent corporation. Locating risky activity in the parent makes the subsidiary an asset that can be reached by judgment creditors. Rational businesses will avoid such a structure, and locate the activity in a subsidiary.

The Code does nothing to discourage formation and reshuffling of subsidiaries to minimize environmental liabilities. Section 351 permits tax-deferred contributions of appreciated property to controlled corporations.¹⁷⁰ These contributions may include property whose value has declined and been depreciated to an amount lower than its value. The Treasury maintains, on doubtful authority, that a tax-free incorporation of such an asset requires a business purpose;¹⁷¹ this requirement hardly presents an obstacle, however, because "business purposes" include isolation of hazardous activities in separate corporations.¹⁷²

¹⁶⁹ H. HENN & J. ALEXANDER, LAWS OF CORPORATIONS 890-95 (1983).

¹⁷⁰ See generally B. BITTKER & J. EUSTICE, FEDERAL INCOME TAXATION OF CORPORATIONS AND SHAREHOLDERS ch. 3 (5th ed. 1987).

¹⁷¹ Rev. Rul. 70-140, 1970-1 C.B. 73.

¹⁷² B. BITTKER & J. EUSTICE, FEDERAL INCOME TAXATION OF CORPORATIONS AND SHAREHOLDERS ¶ 13.09 (1979).

The Code also facilitates shearing away subsidiaries or breaking up separate lines of business into separate corporations for distribution to shareholders.¹⁷³ On general tax principles, such transactions are taxable as distributions or as gain (or loss) producing dispositions of stock.¹⁷⁴ Section 355, however, permits nontaxable corporate division if it is not a "device" to distribute earnings of either corporation, the resulting corporations are engaged in active businesses that were conducted for five years before the distribution, and control of the spun-off company comes to rest in the hands of shareholders.¹⁷⁵

The interpretation given to the "device" provision¹⁷⁶ is especially troublesome for toxic waste policy. Insulating the parent company from potential liabilities has been explicitly approved as a valid business purpose, not a mere "device,"¹⁷⁷ that justifies spinning off or otherwise separating the corporate operations.¹⁷⁸

The tax laws facilitate shell games using corporate subsidiaries to minimize liabilities arising in connection with hazardous wastes. Given the great difficulties of working out proper regulatory models for dealing with toxic waste management, the Code should not complicate environmental policy by facilitating tax-free reshuffling of business enterprises in order to evade their potential liabilities. A reasonable reform would be to limit tax-free incorporation to those restructurings that do not entail escape from environmental liabilities, and to restrict section 355 in a similar manner. Such tax reforms would not be necessary, it should be noted, if the state corporate law liability system were broad enough to make the "shell game" defense ineffective.

6. Tax Treatment of Liability Insurance

The tax treatment of purchased liability insurance is well settled. As long as the coverage has a business purpose, it is deductible (if at all) under section 162 to the extent that it covers liabilities in the current year.¹⁷⁹ With similar effect, section 461(b) prevents deduction in the case of an accrual method taxpayer until the year for

¹⁷³ I.R.C. § 355 (1986).

¹⁷⁴ *Id.* §§ 301, 1001.

¹⁷⁵ The provisions of § 355 are rather intricate; the statement in the text is highly simplified.

¹⁷⁶ See B. BITTKER & J. EUSTICE, *supra* note 172, ¶ 13.06.

¹⁷⁷ See, e.g., Rev. Rul. 76-187, 1976-1 C.B. 97; Rev. Rul. 76-527, 1976-2 C.B. 103.

¹⁷⁸ See, e.g., Rev. Rul. 59-197, 1959-2 C.B. 77.

¹⁷⁹ See, e.g., *Commissioner v. Boylston Mkt. Ass'n*, 131 F.2d 966 (1st Cir. 1942). See also I.R.C. § 461(g) (1986) (cash method taxpayer).

which the coverage was purchased.¹⁸⁰ By contrast, a deduction for self-insurance is impermissible on the theory that no risk transfer took place.¹⁸¹

Captive insurance stands in the middle ground between commercial insurance and self-insurance. The tax law surrounding captive insurance companies is quite well developed, but the concepts are somewhat complex. For purposes of the overview in this Article, however, a few general statements can safely be made.

To have insurance for tax purposes—and hence a potential business expense deduction for the cost of insurance premiums—both risk transfer and risk distribution must occur.¹⁸² Thus, if an insurance company is wholly owned by another company, and the insurer insures only the parent's risk, no tax deduction can be taken for the premiums paid by the parent.¹⁸³ Moreover, a business may not deduct alleged premiums that it disguises as reserves, which would otherwise be nondeductible.¹⁸⁴ Insurance premiums against fire, storm, theft, accident, or other similar losses in the case of a business are deductible,¹⁸⁵ but identical payments set aside in a reserve fund established by a taxpayer are nondeductible on the theory that all the events that fix the fact of the liability have not taken place.¹⁸⁶ The tax implications of a conclusion that a transaction produces insurance rather than a reserve can be dramatic. The distinction may seem anomalous if one views the two payments as identical in amount and purpose. A closer look at the principles of risk transfer and risk distribution may clarify the policy behind the distinction.

a. Risk Transfer

The concept of risk transfer is that another person, and not the insured, must replace the insured as the bearer of the risk. This principle renders an alleged transfer of one's own risk to one's sub-

¹⁸⁰ I.R.C. § 461(b) (1986).

¹⁸¹ See, e.g., *Carnation Co. v. Commissioner*, 640 F.2d 1010 (9th Cir. 1981). The essence of insurance is to transfer the financial risk of the covered event from the purchaser of the insurance to the seller of the insurance. Because self-insurance does not shift the risk to another corporation, from a tax policy point of view the self-insuring taxpayer has merely engaged in reserve accounting.

¹⁸² *Carnation Co. v. Commissioners*, 71 Tax Ct. Rep. (CCH) 400 (1978), *aff'd*, 640 F.2d 1010 (9th Cir. 1981). The rationale is that without both operational results the practical effect is merely self-insurance.

¹⁸³ See *Gulf Oil Corp. v. Commissioner*, 89 Tax Ct. Rep. (CCH) 1010 (1987).

¹⁸⁴ *Id.*; Treas. Reg. § 1.162-1(a) (as amended in 1988).

¹⁸⁵ See, e.g., *Commissioner v. Boylston Mkt. Ass'n*, 131 F.2d 966 (1st Cir. 1942).

¹⁸⁶ See generally *Brown v. Helvering*, 291 U.S. 193 (1934).

subsidiary defective; the risk remains with the real party in interest. The IRS asserts that there is no risk transfer, and hence, no deduction, when a subsidiary company insures its parent company's risk.¹⁸⁷ The Tax Court explicitly supports this view in the case of a wholly owned subsidiary that insures only its parent company's risk, and not the risk of unrelated companies.¹⁸⁸ But the Tax Court also suggests that there may be risk transfer where at least fifty percent of the subsidiary company's premiums are received from unrelated companies.¹⁸⁹

b. Risk Distribution

The risk distribution effect of insurance operates through the diversification of risks. When the law of numbers applies, unusually favorable and unusually harmful experiences tend to balance each other. In theory, unless the pool contains a sufficient diversity of risks, the law of numbers cannot apply.

The Tax Court asserts that all of the risks can be of a related corporation.¹⁹⁰ It has not said how many risks are enough or how one tells whether the law of numbers is operating; apparently the court would be satisfied by the application of insurance industry standards, whatever they may be.¹⁹¹ For example, the Tax Court in *Gulf Oil Corp. v. Commissioner* relied heavily on the tax and nontax literature of the insurance industry for conceptual guidance and gave every indication that it would accept prevailing industry standards to solve the riddles of when there is enough diversification.¹⁹² The court distinguished insurance from the establishment of reserves, indicating that additions to such reserves would be nondeductible.¹⁹³

Another logical requirement for deduction is that the insurance company has to be reasonably able to pay if a casualty occurs.¹⁹⁴ If the "insurer" is unable to pay, in substance no insurance exists. This result relates to the principle of risk distribution, for only through

¹⁸⁷ Rev. Rul. 77-316, 1977-2 C.B. 53. The parent and subsidiary companies are considered to be members of the same economic family. *Id.* at 53-56.

¹⁸⁸ *Clougherty Packing Co. v. Commissioner*, 84 Tax Ct. Rep. (CCH) 948 (1985), *aff'd*, 811 F.2d 1297 (9th Cir. 1987).

¹⁸⁹ *Gulf Oil*, 89 Tax Ct. Rep. (CCH) at 1027 n.14. (relying on Rev. Rul. 80-120, 1980-1 C.B. 41). The one-half figure is an arbitrary, Solomonic threshold.

¹⁹⁰ *Id.* at 1026.

¹⁹¹ *See id.* at 1022-27.

¹⁹² *See id.* at 1025-27 & nn.9-15.

¹⁹³ *See id.* at 1023-24, 1030.

¹⁹⁴ *See O'Brien & Tung, Captive Off-Shore Insurance Corporations*, 31 ANN. N.Y.U. TAX INST. 665, 684-85 (1973).

a pooling of premiums for diverse risks can the insuring entity acquire sufficient capital to cover a major loss.

The situation in which there is virtual certainty that the risk will eventually materialize presents a teasing problem in the insurance area. In such cases, one would assume that a portion of the premiums is equivalent to a reserve for future expenses and should not be deductible. The insurance experts evidently think in terms of uncertain risks,¹⁹⁵ as opposed to certainties. One can insure, for example, the risk of a nuclear power plant being struck by lightning, as opposed to the plant gradually becoming radioactively "hot." One wonders if there might be borderline cases where some premiums that are really in the nature of reserves against sure things might be deductible as payments to cover uncertainties, for example, a policy that covered a nuclear power plant *prematurely* becoming "hot."¹⁹⁶

Commercial coverage may become unavailable just when taxpayers need it most. In recent years, for example, virtually no commercial insurance has been available for environmental liabilities associated with industrial activity.¹⁹⁷ If self-insurance and reserve accounting do not afford tax deductions for coverage of environmental risks, the economics of the particular situation may drive the taxpayer to risk all by "going bare"—not funding the risk. The risk may be attractive if a modestly capitalized subsidiary is used, thereby potentially minimizing the real economic risk to the taxpayer. This highly undesirable outcome is exacerbated by state corporate laws that enable shareholders to avoid personal liability for corporate acts and to drain the corporation of operating profits, leaving a "suit-proof" malfeasant.

The potential of uninsured risks poses difficult policy choices. One alternative is to proscribe or sharply limit the activity that produces the risk. Another is to facilitate self-insurance by setting clear federal standards in the form of "safe harbor" rules, which, if satisfied, can assure the taxpayer that a deduction will be available. Opponents of such a scheme can be expected to argue that, if industry members are not willing to engage in risk-pooling on their own, the activity should not be subsidized. That argument fails, however, to take

¹⁹⁵ See A. WILLETT, THE ECONOMIC THEORY OF RISK AND INSURANCE 72 (1951).

¹⁹⁶ There seem to be no litigated cases on point and the window of opportunity for crafty taxpayers seems narrow.

¹⁹⁷ UNITED STATES GENERAL ACCOUNTING OFFICE, HAZARDOUS WASTE: ISSUES SURROUNDING INSURANCE AVAILABILITY 17-27 (1987).

account of the overall economic and social utility of the industry.¹⁹⁸ It also overlooks the possibility of blending a variety of risks under one insurance premium, a step that is sometimes taken in the name of social policy even though it contradicts sound actuarial principles and full internalization of costs. Determining which economic activities to "subsidize" is, to be sure, a perplexing question as a matter of both theory and political choice. Its very perplexity suggests the desirability of reform through a specially tailored federal statute that balances the competing policies.

Another approach would be to provide federal insurance against disasters involving toxic wastes, and to allow a tax deduction for contributions to purchase such insurance. The appeal of such an approach would be broad risk-pooling, with a greater likelihood of appropriate risk-shifting because the large number of participants should even out the actual types of liabilities that come home to roost as disasters.

In this difficult and speculative field, two certainties stand out: (1) private insurance is frequently unavailable; and (2) barring scientific miracles, taxpayers will continue to conduct activities that will generate hazardous wastes and their attendant liabilities that our environmental, tort, and corporate laws cannot prevent. Providing federal insurance bends to those realities. The benefit is that the government as insurer can insist on appropriate minimum standards of conduct that should operate as a healthy control on irresponsible actors. In fact, if insurance is made a condition of permission to do business, and government insurance is available only upon compliance with environmental regulations, polluters that fail to abide by the rules and thereby lose insurance coverage would be forced to shut down.¹⁹⁹

The Code's application to environmental liability insurance is traditional. Section 162 deductions might be denied on indirect public

¹⁹⁸ For example, the nuclear weapons industry would probably adopt a more responsible attitude about health and environmental protection if government removed the shield of sovereign immunity. Without sovereign immunity, private nuclear weapons contractors would need to cover new financial liabilities, but they would face the same obstacles to commercial insurance or risk pooling that their compatriots in the civilian nuclear energy industry faced and perhaps greater ones.

¹⁹⁹ The Resource Conservation and Recovery Act, for example, requires insurance coverage as a condition for receiving a permit to operate a hazardous waste treatment, storage, or disposal facility. 42 U.S.C. § 6924(a), (t) (1986). The collapse of the commercial insurance market prevented some facilities from continuing to operate, leading in turn to a highly concentrated, essentially oligarchical, waste management industry. A government-run insurance fund might have alleviated these problems and fostered a more competitive industrial structure, without any diminution in the efforts to protect the environment.

policy grounds as "extraordinary,"²⁰⁰ but that result is unlikely. Where insurance is unavailable, it may be wise to modify the Code to facilitate industry-wide risk-pooling mechanisms that would produce deductions for actuarially reasonable contributions to the pool. The fund might operate on a tax-deferred or currently taxable basis. Federal insurance could be provided selectively where the private market is unable to meet the demand for insurance from accepted, legitimate businesses. Premiums that paid for such insurance should be currently deductible.

IV. CONCLUSION

The discord between generally accepted environmental values and statutorily prescribed environmental policies on the one hand, and the Code on the other, is remarkable. Major rethinking of the relationship between the two is definitely in order.

Formal institutional intervention to bring environmental policy objectives to the attention of the tax code writers is the first necessary step. Tax legislative process should include an advisory service whose role is to consider the environmental impact of future tax legislation. A good place to put the watchdog would be in the Joint Committee on Taxation. Candidates for the role of advisor include designated groups within the Office of Technology Assessment, or perhaps the Congressional Research Service. Tax legislation originating in the Treasury Department should be reviewed by the President's Council on Environmental Quality before submission to Congress. For major proposals, a NEPA environmental impact statement should be prepared.

In addition to making changes in the legislative process, Congress should amend several portions of the Code. In particular, no tax deduction should be allowed for business expenses that conflict with significant environmental policies. An amendment to section 162 of the Code to deny deductions for such expenditures could accomplish general conformity. The exact language of the amendment would have to be carefully worded to avoid *de minimis* cases and to keep pace with scientific and legislative developments.

As part of the effort to resolve inconsistencies between the Code and environmental policies, Congress should also repeal percentage depletion for extracting asbestos and cut back or repeal the allowances for extracting lead, mercury, uranium, and sulphur. In a better

²⁰⁰ See text accompanying *supra* note 51.

world, Congress would limit aggregate percentage depletion in all cases to the taxpayer's investment in the mineral property.

In addition to correcting negative tax consequences for the environment, Congress should enact positive measures to induce safe and clean industrial procedures. Accordingly, while retaining the basic structure of section 169, Code revisions should enhance the incentives for installing new pollution control facilities.

Finally, the IRS, in conjunction with Congress, should reconsider its approach to the reserve method of accruing liabilities for future pollution control activities. In general, the nuclear decommissioning rules provide an appropriate model in which current deductions are allowed for current cash contributions to a dedicated fund. The funds, however, should be placed beyond the reach of creditors. A federal deposit system would be one good way to assure that the funds are not deflected from their intended use.

The intimate connection between tax and corporation laws compels a reevaluation of current laws on incorporation and corporate structure, as well as of the Code. Above all, the corporate laws relating to undercapitalized high liability subsidiaries should be modified. It should not be possible for a prosperous parent corporation to place its environmentally risky activities in a weakly capitalized subsidiary. Tax considerations are a minor factor here; this problem should be addressed head on with nontax legislation.

Ultimately, as with most broad-scale social and economic activities, insurance against unexpected and unintended environmental consequences plays a significant role. For activities with high environmental risk, pooled liability insurance arrangements should be encouraged. The real problems are not the tax law's restriction on the definition of deductible insurance payments, but the absence of reserve accounting and the collapse of the commercial market to insure against environmental hazards. In preference to a proliferation of uninsured risks, a federal insurance program should be created to provide coverage against such liabilities. In addition, self-insurance through establishing properly protected cash reserves can promote environmental protection and cleanup without disrupting accepted notions of insurable risks.

This brief and selective overview of tax code implications for private actions to protect and improve the environment reveals a wealth of contradictions and disincentives. Although special taxes and fees can sometimes be used to promote very specific pollution control objectives, general tax policy cannot carry the burden of environmental policy. The endeavor of this Article has been to illu-

minate some instances in which tax policy, usually inadvertently, works against important environmental policies that the United States is spending billions to accomplish. In the process, this Article has also uncovered some constructive elements in the Code that appear to facilitate sound industrial practices. What emerges most clearly from both the negative and the positive findings is the clear need to integrate environmental policy with the design and revision of the tax code. No federal law has the pervasive reach and the direct bottom-line impact of the tax code. As a result, it should be applied consciously and coherently to encourage and facilitate sound environmental practices in all areas of American business.